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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,745	07/10/2006	Ursula Ziegler	CICTG-23-PCT-US 2003/G018	3493
22827	7590	02/16/2011	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			FREEMAN, JOHN D	
			ART UNIT	PAPER NUMBER
			1787	
			MAIL DATE	DELIVERY MODE
			02/16/2011 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/584,745

## Applicant(s)

ZIEGLER ET AL.

## Examiner

John Freeman

## Art Unit

1787

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7, 8, 10-13, 15-17, 19, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 7, 8, 10-13, 19, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No.(s)/all Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. Claims 2-4, 7-8, 10-13, 19, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flexman et al. (US 2004/0121175) in view of Tanaka et al. (US 4,376,856).
2. Regarding claims 2-3, 10-12, and 21-22:
3. Flexman discloses an article having substrate comprising a blend of POM and a thermoplastic polymer, and another layer adhered to the substrate [0014]. The thermoplastic polymer can be thermoplastic polyurethane [0033], polycarbonates, SAN, etc. [0041]. The overmolded layer on the substrate can be a thermoplastic elastomer [0091-92].
4. Flexman is silent with regard to a polyetheramide elastomer.
5. Elastomers having the presently claimed structures were well-known in the art. For example, Tanaka discloses polyetheramide elastomers containing (A) aminocarboxylic acid, (B) polyoxyalkylene glycol, and (C) dicarboxylic acid (col 1 ln 60-68). Such a polyetheramide would comprise repeating units corresponding to the presently claimed (I) and (III). The aminocarboxylic acids include aliphatic compounds such as 11-aminoundecanoic acid, which forms nylon-11 (col 2 ln 15-27). (B) can be polyethylene glycol, polypropylene glycol, or polytetramethylene glycol (col 2 ln 28-36).
6. Tanaka discloses polyetheramides have excellent properties such as impact resistance and elasticity (col 1 lines 52-55).
7. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use conventional polyetheramide elastomers, e.g. as taught by Tanaka, as the polyetheramide elastomer in the composite taught by Flexman to arrive at a composite having desirable qualities such as excellent impact resistance and elasticity.
8. The present claims are written in a product-by-process format. The examiner takes the position that the final composite structure of the tubing taught by Flexman combined with Tanaka would be indistinguishable from the final product of the presently claimed invention, as both describe a layer of POM adhesively bonded to a polyamide elastomer.

9. With regard to the presently claimed tensile bond strength limits, the examiner takes the position that the composite tubing of Flexman combined with Tanaka satisfies Applicant's requirements given that the composite has the same structure as claimed.
10. Regarding claim 4:
11. The POM and TPU can have conventional additives, e.g., stabilizers [0028; 0089].
12. Regarding claim 7:
13. The TPU makes up 5-20% of the substrate [0031].
14. Regarding claim 8:
15. Given the polyetheramide elastomer taught by Tanaka is the same that presently claimed, the examiner takes the position that the elastomer of Tanaka intrinsically has hardness within the presently claimed range.
16. Regarding claim 13:
17. The elastomer layer is "co-continuous," i.e., completely covers the substrate [0014; 0020].
18. Regarding claim 19:
19. Flexman notes sealing clips can be made [0015]. Furthermore, the examiner considers the POM coated with the thermoplastic polyetheramide elastomer to be a non-slip or easy-grip component intrinsically.

#### ***Response to Arguments***

20. Applicant's arguments filed 12/17/2010 have been fully considered but they are not persuasive.
21. The examiner appreciates Applicant's efforts to address the issues under 35 USC 112, first paragraph. The previous rejections are hereby withdrawn.
22. Applicant submits the polymer taught by Tanaka is outside the scope of the present claims. Specifically, Applicant submits Tanaka discloses a terpolymer having three distinct blocks of polymerized (A) aminocarboxylic acid, polymerized (B) poly(alkylene oxide)glycol, and polymerized (C) dicarboxylic acid (p9). In contrast, Applicant submits the present claims exclude the two blocks of a series of ester bonds and a series of ether blocks, corresponding to polymerized (C) and (B) respectively (p10).

Art Unit: 1787

23. The examiner respectfully disagrees. Although Tanaka does, in only a few instances, refer to the copolymer as a "polyether-ester amide block copolymer" (e.g., col 5 ln 27), the examiner submits this is a result of imprecise language. That is, the examiner submits the term "block" refers to the fact that there are portions (or blocks) of the polymer that have an amide, and possibly the ether and ester portions (e.g., col 3 ln 49-50).

24. The basis for the examiner's position lies in the examples of Tanaka, and the conventional knowledge of those in the art. In Example 1, Tanaka discloses simply adds together the three components (A), (B), and (C) together in a vessel and polymerizes the entire mixture (col 5 ln 35+). Conventionally, a block copolymer requires polymerizing each block sequentially. That is, one would first polymerize component (A) to form a first block, then add component (B) and polymerize that to form a second block, and finally add component (C) and polymerize that to form the third block. The experimental setup described by Tanaka would appear to result in a random copolymer, wherein all three components (A), (B), and (C) are randomly polymerized together. Thus, the polymerization of does not result in the three distinct blocks submitted by Applicant, and therefore reads on the present elastomer.

25. In regard to the examiner's submission that Flexman combined with Tanaka creates a composite with the presently claimed bond strength, Applicant notes inherency cannot be based on probabilities or possibilities (p11).

26. The examiner submits that because Flexman combined with Tanaka disclose a product that is the same as, or is otherwise indistinguishable, from the final product of the present claims, the product of the combined references must intrinsically possess the same properties.

27. Applicant states the process step of heating the polyacetal molding prior to molding-on the elastomer results in improved tensile bonding strength (p11-12).

28. First, it is noted that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding improved tensile bond strength must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration

or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001\*.

29. Furthermore, given that the claims are directed to the product, the data would be required to show the product of the present claims results in unexpected improvements over the closest prior art.

### ***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The provided ARKEMA brochure (PEBAX® Application Areas. 6/2000.) discloses the use of PEBAX® 2533, the same elastomer presently used, was commercially available and well known at the time of the invention. The additional ARKEMA brochure (PEBAX® Polyether Block Amides Technical Data) discloses the physical properties of the PEBAX® elastomers.

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 9:00-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1787

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Freeman  
Examiner  
Art Unit 1787

/John Freeman/  
Examiner, Art Unit 1787

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1787